Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for processing an ~~electronic~~ XML document, wherein said ~~electronic~~ XML document comprises a tree structure comprising branches comprising a plurality of nodes, the method comprising steps of:

receiving a query comprising an XPath expression, the query comprising search criteria and wherein the search criteria comprise a set of constraints that specify forward or backward relations between nodes;

receiving a context node from the ~~electronic~~ XML document with respect to which the search criteria are applied;

receiving at least a portion of the ~~electronic~~ XML document;

modifying the search criteria to introduce a constraint matching the context node into the set of constraints;

processing the at least a portion of the ~~electronic~~ XML document in a streaming manner and using the modified search criteria in a single depth-first traversal of the at least a portion of the XML document; and

locating one or more nodes that satisfy the modified search criteria.

2. (Currently amended) The method of claim 1, wherein the ~~electronic~~ XML document is stored in memory.

3. (Cancelled)

4. (Currently amended) The method of claim 1, wherein the ~~electronic~~ XML document is a streaming document.

2

5. (Previously presented) The method of claim 1 wherein the modifying step further comprises modifying the search criteria such that constraints specifying a backward relation may be reformulated into forward constraints.

6. (Cancelled)

7. (Original) The method of claim 1 wherein the query is represented by a modified directed acyclic graph comprising a node "Ctxt" which only matches the context node.

8. (Currently amended) The method of claim 1 further comprising reordering the tree structure representing the ~~electronic~~ XML document to be searched such that the number of nodes traversed is minimized.

9. (Currently amended) The method of claim 1 further comprising reordering the tree structure representing the ~~electronic~~ XML document to be searched such that the context node is traversed as early as possible.

10. (Currently amended) The method of claim 1 further comprising reordering the tree structure representing the ~~electronic~~ XML document to be searched such that the context node appears in the path of the tree that is traversed first.

11. (Currently amended) An information processing system comprising memory for storing the following instructions:

receiving a query comprising <u>an XPath expression, the query comprising</u> search criteria and wherein the search criteria comprise a set of constraints that specify forward or backward relations between nodes;

receiving a context node of an ~~electronic~~ XML document with respect to which the

3

search criteria are applied;

receiving at least a portion of said ~~electronic~~ XML document;

modifying the search criteria to introduce a constraint matching the context node into the set of constraints;

processing the <u>at least a portion of the</u> ~~electronic~~ XML document in a streaming manner and using the modified search criteria <u>in a single depth-first traversal of the at least a portion of the</u> ~~electronic~~ XML document; and

locating one or more nodes that satisfy the modified search criteria; and

memory for storing the above instructions; and

a processor for performing the instructions.

12. (Original) The information processing system of claim 11 wherein the memory further comprises an instruction for modifying the search criteria such that constraints specifying a backward relation may be reformulated into constraints specifying a forward relation.

13. (Currently amended) The information processing system of claim 11 wherein the ~~electronic~~ XML document is stored in memory.

14. (Cancelled)

15. (Currently amended) The information processing system of claim 11 wherein the ~~electronic~~ XML document is a streaming document.

16. (Previously presented) The information processing system of claim 11 wherein the memory further comprises logic for modifying the search criteria such that constraints specifying a backward relation may be reformulated into forward constraints.

17. (Cancelled)

18. (Original) The information processing system of claim 11 wherein the query is represented by a modified directed acyclic graph comprising a node "Ctxt" which only matches the context node.

19. (Currently amended) The information processing system of claim 11 further comprising logic for reordering the tree structure representing the ~~electronic~~ XML document to be searched such that the number of nodes traversed is minimized.

20. (Currently amended) The information processing system of claim 11 further comprising logic for reordering the tree structure representing the ~~electronic~~ XML document to be searched such that the context node is traversed as early as possible.

21. (Currently amended) A computer executable medium comprising program instructions for:

receiving a query comprising an XPath expression, the query comprising search criteria and wherein the search criteria comprise a set of constraints that specify forward or backward relations between nodes;

receiving a context node of an ~~electronic~~ XML document with respect to which the search criteria are applied;

receiving at least a portion of said ~~electronic~~ XML document;

modifying the search criteria such to introduce a constraint matching the context node into the set of constraints;

processing the at least a portion of the ~~electronic~~ XML document in a streaming manner and using the modified search criteria in a single depth-first traversal of the at least a portion of the XML document; and

locating one or more nodes that satisfy the modified search criteria.